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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,104	11/30/2006	Henning Nielsen	PATRADE	5091
49801	7590	11/19/2007		
JAMES C. WRAY 1493 CHAIN BRIDGE ROAD SUITE 300 MCLEAN, VA 22101			EXAMINER KLAUS, LISA NHUNG	
			ART UNIT 2832	PAPER NUMBER
			MAIL DATE 11/19/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/580,104

Applicant(s)

NIELSEN, HENNING

Examiner

Lisa N. Klaus

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are not formal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Specification***

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

- (I) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

- Pages 9, last line and 10, line 1, there are two figures 2.

### ***Claim Objections***

3. Claims 5 is objected to because of the following informalities:

- Claim 6 depends on itself. However, Examiner assumes claim 6 depends on claim 1. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A- The term "may be" in claims 1, 6 and 7 is a relative term which renders the claim indefinite. The term "may be" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

B- The terms "such as," and "for example" in claim 8 is a relative terms which renders the claim indefinite. The terms "such as" and "for example" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite

degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimata et al. (US 7,176,392) in view of Dillon et al. (US 3,679,846) further in view of Yamasaki (US 6,713,692).

Mimata discloses a multi-contact input device comprising:

- a first member 31 is rotatably and tiltably arranged in relation to a second member 11;
- one or more switch devices 41 and 42 are arranged within the periphery of the first member 31, such that by tilting the first member one or more switches 41 and 42 on the second member 11 is activated;
- the switches are dome type.

Mimata does not disclose a micro switch.

Dillon discloses a gear change switch comprising the micro switch 28.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to use the micro switch as taught by Dillon with Mimata's device for the purpose of using in the small, sensitive and automatic device.

Mimata and Dillon does not disclose a tactile switch.

Yamasaki discloses a switch mechanism comprising the tactile switch (col, 2, lines 16-24).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to make the tactile switch as taught by Yamasaki with Dillon device for the purpose of being able to feel the sense of touch.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to make the activation of the switch by tilting the first member as little as 2/10 mm for the purpose of facilitating to contact the switch.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimata, Dillon and Yamasaki in view of Cheng et al. (US 6,809,275).

- Regarding claim 2, Mimata, Dillon and Yamasaki do not disclose the optical encoder.

Cheng discloses a rotary and push type input device comprising the optical detector 48.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to use the encoder as taught by Olcott with Mimata's device for the purpose of producing digital signals that are typically quadrature in nature (see col. 1, lines 56-63).

9. Claims 3, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimata, Dillon in view of Nakamura et al (US 6,246,019).

- Regarding claim 3, Mimata, Dillon and Yamasaki do not disclose the switch device that tilting the first member in a position superposing a switch generates a first signal and tilting the first member in a position whereby two switches are activated generates the second signal.

Nakamura discloses a multidirectional switch comprising the switch device that tilting the first member in a position superposing a switch generates a first signal and tilting the first member in a position whereby two switches are activated generates the second signal see (col. 2, lines 1-43).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to generate the switches to different positions for the purpose of controlling the additional functions.

- Regarding claim 4, Nakamura discloses:

- The intermediate member 13 is arranged between the first member 22 and the second member 11;
- The intermediated has an area 54 at least such that it covers the switches arranged on the second member 11 and made from elastic material (col. 6, lines 34-46).

Nakamura does not disclose the intermediate member comprises the upper and lower layer made from plastic material.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to make the intermediate to two plastic layers for the purpose of suitability for the intended use.

- Regarding claim 8, Nakamura discloses:

- the electronic device is any appliance where it is desirable to allow the user to enter input (col. 1, lines 5-9).

***Allowable Subject Matter***

10. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The Prior Art does not teach or suggest the device comprising:

- Claim 5: the axle provided centrally in the disc and perpendicular to the plane of the disc is held with play in an aperture provide in the intermediate member and the second member or alternatively that either the axle or the inside wall of the aperture is conically shaped, such that the axle may tilt in relation of the plane of the second member, whereby the tilting action of the first member is facilitated.

- Claim 6: the two rings comprising flanges are provided, where the rings are pressed together in interlocking relationship such that the second member and the intermediate member are held by the flanges of the two rings.

- Claim 7: the first member is provided with a torus on the side facing the second member, the intermediate member facing the second member protrusions superposed



Application/Control Number:  
10/580,104  
Art Unit: 2832

Page 8

the switches arranged on the second member are provided, and optionally between the protrusions and the bearing a number of secondary protrusions are provided.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

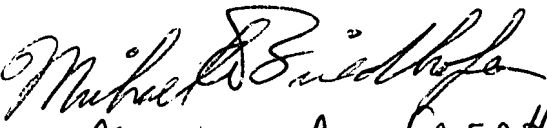
### **Conclusion**

12. Any inquiry concerning this communication should be directed to Lisa Nhung Klaus whose telephone number is (571) 272-1993, and whose fax number is (571) 273-1993. In the event that I am not reached, you can contact my supervisor, Mr. Elvin G. Enad at (571) 272-1990 or the tech center receptionist at (703) 308-1782.

Lisa Nhung Klaus

Patent Examiner - Art Unit 2832

November 6, 2007

  
MICHAEL A. FRIEDHOFER  
PRIMARY EXAMINER  
A.U. 2832